

PRELIMINARY DESIGN SUMMARY

I-90 Undercrossing
NW Gilman Boulevard to SE 56th Street

Prepared for:
City of Issaquah
Public Works Department

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EXECUTIVE SUMMARY

In January, 2004, HDR Engineering, Inc. (HDR) was authorized to begin a conceptual investigation of an additional under-crossing of Interstate 90 (I-90). This project involves conversion of the existing paved driveway to a public two-lane roadway to provide an additional connection between the north and south sides of I-90. The proposed new connection would cross under the existing I-90 over-crossing, utilizing the existing driveway within the former Burlington Northern Santa Fe (BNSF) Railroad (currently owned by King County and leased to Zetec). The alignment would continue north to SE 56th Street utilizing the existing 221st Place SE roadway alignment.

Prior to the detailed evaluation of the alternatives, a fatal flaw analysis was completed that evaluated wetland and right-of-way impacts as well as potential impacts to the existing I-90 bridge piers at the undercrossing.

A field investigation of the wetlands and existing stream within the project corridor found very minor impacts to the sensitive areas as a result of the proposed improvements. The proposed corridor will have minor impacts to one wetland just south of SE 62nd Street and west of the proposed alignment. This impact will require the development of a small replacement wetland or enhancement of an existing wetland within the project area.

An evaluation of the right-of-way requirements was completed to insure that the proposed improvements are buildable and do not require impacts to properties that cannot be mitigated. Impacts to parking within the King County right-of-way at the Zetec property may be significant. Opportunities for mitigation of the loss of parking will need to be investigated further. According to the lease agreement by King County, it does not appear that there are any stipulations for providing or replacing any parking within the Railroad Right-of-Way if the lease agreement is cancelled. A reconfiguration of existing and some supplemental parking will likely be required to mitigate the impacts of the lost parking north of Zetec on private property. The overall right-of-way impacts for each alternative are outlined on the plans in Appendix A and the attached report.

Impacts to the existing bridge piers were considered to be one of the most significant potential fatal flaws for the project. Close coordination with WSDOT found that all alternatives were feasible and did not present a design challenge assuming the WSDOT design guidelines are followed. The guidelines require a minimum 2-foot clear zone between the face of curb and the face of the pier which is feasible in all proposed alternatives. Discussions with WSDOT verify that no special design considerations will be required and no fatal flaws exist.

Three alternatives for the connection of the new corridor to NW Gilman Boulevard were developed during this project. Each alternative is summarized below:

Gilman Intersection Alignment #1 (Post Office) – This alignment is the most westerly alignment that will expand the existing US Post Office entrance at the existing Gilman Boulevard signalized intersection. The north leg of the intersection will be widened to provide a single southbound right turn lane onto Gilman Boulevard, one southbound combination through and left turn lane, an additional dedicated southbound left turn lane and a single northbound lane. The intersection improvements will require approximately 250 feet of left turn storage within Gilman Boulevard to accommodate the anticipated turning movements onto the new roadway.

Pros

1. Utilizes existing signalized intersection at Post Office
2. Location farthest from Front Street and Gilman intersection
3. Single owner private property impacts
4. Maintains maximum development potential for Post Office parcel

Cons

1. Horizontal curve approaching intersection is below City standards (Can be corrected with advisory signage for reduced speed)
2. Intersection improvements will impact Post Office parking lot / circulation
3. Small retaining wall will be required to eliminate impacts to I-90 bridge piers
4. Significant right-of-way impacts

Gilman Intersection Alignment #2 (Gilman Station) – This alignment will intersect Gilman Boulevard approximately 300 feet east of the existing signalized intersection at the US Post Office entrance and adjacent to Gilman Station. This intersection will require a new signalization system and removal of the existing signal at the Post Office entrance. The new alignment will provide a single southbound right turn lane onto Gilman Boulevard, two southbound left-turn lanes and a single northbound lane. As with alignment #1 (Post Office) this alternative will require additional left turn storage to be added to Gilman Boulevard.

Pros

1. Horizontal curve approaching intersection meets City standards
2. No impacts related to the I-90 bridge piers
3. Does not impact Post Office parking lot or circulation

Cons

1. Requires acquisition at Gilman Station and loss of approximately 10 stalls
2. Requires restricted access to Gilman parking and limits internal circulation
3. New signal location will require removal of Post Office signal
4. Requires restricting turning movements at the Post Office driveway
5. Right-of-way impacts to two parcels

Gilman Intersection Alignment #3 (Railroad) – This alignment will utilize the existing intersection with Gilman Boulevard at the existing roadway near the BNSF railroad. The intersection will be reconfigured and widened to provide a single southbound right turn lane, two southbound left turn lanes, and a single northbound lane.

Pros

1. Reduced right-of-way impacts compared to Alternatives 1 and 2
2. Does not require horizontal curve to intersect Gilman Boulevard
3. Utilizing existing roadway minimizes grading impacts

Cons

1. A skewed/offset intersection will be required at Gilman Boulevard resulting in restricted and/or difficult turning movements. Offset intersection also decreases operational safety and increases construction costs
2. Skewed intersection will require left turn restrictions for larger vehicles from Gilman Boulevard to the new alignment
3. Major reconstruction of the intersection may be required to accommodate existing roadway on the south side of the intersection
4. Intersection improvements to allow right turns on to Gilman Boulevard may impact access to Gilman Station parking lot and restrict internal circulation

Two alternatives were developed for the roadway between SE 62nd Street and SE 56th Street. Each of the alternatives is summarized below:

Full Width Section - The first option was to provide a fully built out section including two 14-foot wide travel lanes, an 11-foot wide two-way left turn lane and 5.5-foot sidewalks on both sides. This alternative provided the ultimate section to accommodate traffic as well as pedestrians however it also had the highest degree of right-of-way impact.

These improvements are considered desirable in order to correct the existing design deficiencies along this corridor. The existing roadway is very narrow in places and the alignment is not desirable. Adding additional traffic to this section of roadway without improvements will present traffic safety issues.

Modified Width Section - The second alternative developed for this section provided for a minimum reduced section to include two 14-foot travel lanes and a 5.5-foot sidewalk on the east side only. This section, as predicted, reduced the right-of-way impact however it could conflict with future turning movements of entering and exiting vehicles from the businesses along the roadway without the two-way left turn lane provided in the first option. These improvements are considered to be minimum necessary to correct the existing design deficiencies along this corridor due to the narrow existing roadway in places and the undesirable alignment. Adding additional traffic to this section of roadway without improvements will present traffic safety issues.

Following an evaluation of the pros and cons for the described alternatives with City staff and the Administration, the preferred alternative (Administration's Recommendation) is identified as the Gilman Boulevard Intersection Alternative #1(Post Office) and the Modified Width Section in the northern portion of the corridor between SE 62nd Street and SE 56th Street. The design, environmental, right-of-way and construction cost for this preferred alternative is estimated at \$11,679,000.

City of Issaquah – I-90 Undercrossing
(Gilman Boulevard to SE 56th Street)

PRELIMINARY DESIGN SUMMARY

INTRODUCTION

The first phase of this project was to investigate three possible intersection alternatives connecting to NW Gilman Boulevard, two corridor alignments between SE 62nd Street and SE 56th Street and one least impactful corridor alignment between I-90 and SE 62nd Street.. The investigation involved reconnaissance of existing wetlands and environmental impacts related to the proposed alignments, identification of right-of-way impacts and configuration of the intersections with Gilman Boulevard. This work has been completed and alignment alternative base maps have been submitted to the City of Issaquah in hard copy format and electronic format along with conceptual cost estimates of each alternative. See Appendix A for concept plans and Appendix B for cost estimates.

The development of the conceptual alternatives to provide access from Gilman Boulevard to SE 56th Street produced three alignment alternatives for the intersection with Gilman Boulevard as well as two alternatives for the roadway section from SE 62nd Street to SE 56th Street. This report will provide descriptions of each alternative including design criteria, pros and cons of each alternative together with a recommendation of a preferred alternative. This report also provides a single corridor alignment between I-90 and SE 62nd Street to minimize property and wetland impacts.

PROJECT DESCRIPTION

The proposed alignment alternatives traverse through many different land uses and topography including residential, industrial, and commercial properties. Currently the properties located along Gilman Boulevard are developed along their frontages. Alignment #1 (Post Office) and #2 (Gilman Station) will travel northerly through undeveloped property currently owned by the US Post Office. The area is relatively flat consisting of low growing vegetation and localized depressions. The property also contains an existing stormwater pond which treats stormwater generated from the US Post Office parking lot. Continuing north, the alignment follows the existing BNSF railroad and an existing access road owned by King County serving Zetec by a Lease Agreement. Near the intersection with SE 62nd Street the proposed alignment crosses the North Fork of Issaquah Creek where it ties into 221st Place SE. The corridor continues north along 221st Place SE following an existing two lane roadway where it ends at SE 56th Street. Along this existing roadway the topography is relatively flat and meanders along the shoreline of the creek. The properties along the east side of the roadway are industrial and residential. In addition the roadway along SE 62nd Street is privately owned as well as 221st Place SE from SE 62nd Street to the north a short distance.

DESIGN CRITERIA

The conceptual alignments were based on the following design requirements:

- ◆ City of Issaquah Design Standards
- ◆ WSDOT Design Manual
- ◆ AASHTO Policy on Geometric Design of Highways and Streets
- ◆ MUTCD, HCM
- ◆ King County Drainage Manual, 2004 Proposed Draft

Roadway Classification:	Minor Arterial
Design Speed:	35 MPH
Posted Speed:	30 MPH
Minimum horizontal radius:	410 feet
Minimum stopping sight distance:	250 feet

The design speed was used for entering and stopping sight distance criteria.

CONCEPTUAL ALIGNMENTS

The development of the conceptual alignment alternatives to provide access from Gilman Boulevard to SE 56th Street produced three alignment concepts for the intersection with Gilman Boulevard as well as two concepts for the roadway section from SE 62nd Street to SE 56th Street. *(Each concept was developed using aerial data and five foot contours supplied by the City of Issaquah. Survey base mapping and additional design development of the alignment will be required as part of the final design of the project.)* Below is a detailed discussion of each alternative including a listing of pros and cons for each.

Gilman Intersection Alignment #1 (Post Office)

This alignment is the most westerly alignment that will expand the existing US Post Office entrance at the existing Gilman Boulevard signalized intersection. The north leg of the intersection will be widened to provide a single southbound right turn lane, one combination southbound through and left turn lane, an additional dedicated southbound left turn lane onto Gilman Boulevard and a single northbound lane. The intersection improvements will require approximately 250 feet of left turn storage within Gilman Boulevard to accommodate the anticipated turning movements onto the new roadway.

This alignment is approximately 730 feet long from Gilman Boulevard to the tie-in at the main north alignment. The alignment incorporates a reverse horizontal curve to avoid impacts to the existing I-90 bridge piers. To accommodate the reverse curvature a below standard horizontal curve was utilized. Even though a below standard curve radius was used the minimum sight distances were achieved. In addition to preserve the existing I-90 pier support fill, it is anticipated that a retaining wall would be constructed with a varying height of 2-5 feet.

Pros

- The intersection with Gilman Boulevard is an existing signalized intersection. This option will allow the use of the existing signal.
- The location of this intersection is the farthest from the major intersection of Gilman Boulevard and Front Street which currently experiences major queuing lengths along Gilman Boulevard
- The impacts to private property are limited to a single property owner which may reduce the schedule for acquisition and costs.
- Location maintains maximum development potential for the Post Office Parcel

Cons

- The proposed reverse horizontal curve is below the minimum curve radius as defined in the City of Issaquah Design Standards for Minor Arterials. Advisory signage will be required.
- The widening of the north leg of the existing intersection and the storage required for turning movements along the first 300 feet of the alignment will impact the existing US Post Office parking lot and internal circulation.

- To reduce the impacts to the existing I-90 pier fill slopes, the construction of a retaining wall along the west side of the new roadway will be required.
- The proposed relocated Post Office driveway will be within the taper of the turning lanes increasing the conflict width for entering traffic.
- The proposed right-of-way impacts to the Post Office property will be significant (50,690 SF).

Gilman Intersection Alignment #2 (Gilman Station)

This alignment will intersect Gilman Boulevard approximately 300 feet east of the existing signalized intersection at the US Post Office entrance. This intersection will require a new signalization system and removal of the existing signal at the Post Office entrance. The new alignment will provide a single southbound right turn lane and two southbound left turn lanes onto Gilman Boulevard and a single northbound lane. As with alignment #1, this alternative will require additional left turn storage to be added to Gilman Boulevard

This alignment is approximately 618 feet long from Gilman Boulevard to the tie-in at the main north alignment and incorporates a single 500-foot radius horizontal curve.

Removing the Post Office traffic signal may be problematic related to traffic safety. Since motorists are accustomed to a signal control, allowing the various uncontrolled turning movements at that driveway will have a higher risk of accidents. In order to provide for adequate safety, the Post Office driveway would need to be restricted to no left-turns out and an access from the Gilman Station Signalized intersection to the post office would need to be provided to allow traffic to turn left to head easterly to Front Street.

Pros

- Horizontal curvature meets City design standards.
- Because this alignment alternative ties into the main north alignment prior to the I-90 piers the alignment intersection the piers at a parallel alignment thus reducing the roadway conflict points.
- The alignment is located east of the Post Office development and therefore does not conflict with the existing parking lot or entrance.

Cons

- The location of the intersection will require the acquisition of a portion of the existing parking lot at the Gilman Station Development resulting in the loss of approximately 10 parking stalls.
- Because the existing west entrance into Gilman Station is located near the proposed intersection the result will be a restriction of ingress and egress from the parking lot and limited circulation within the Gilman Station parking lot.
- The addition of a signal at the proposed intersection with Gilman Boulevard will require removal of the existing signal at the Post Office Intersection. This may impact the access out of the Post Office parking lot based on the anticipated volumes on Gilman Boulevard
- As discussed in bullet #2 the access into the Gilman Station parking lot is located very close to the proposed intersection and therefore would require access control, possibly a right in / right out configuration or at a minimum, Left-turns out of the Post Office Intersection may need to be restricted.
- This configuration will considerably affect internal circulation within the Gilman Station parking lot.

- The alignment will travel north through two separate parcels. The first is the US Post Office property (46,150 SF) and the other is the Gilman Station Association property (1,470 SF).
- Similar to Alignment #1, the need exists for the construction of a left turn pocket on Gilman Boulevard onto the new alignment. The amount of potential left turn storage is limited due to the existing left turn pocket at the Post Office intersection.

Gilman Intersection Alignment #3 (Railroad)

This alignment will utilize the existing intersection with Gilman Boulevard at the existing roadway near the BNSF railroad grade. The intersection will be reconfigured and widened to provide a single southbound right turn lane, two southbound left turn lanes, and a single northbound lane.

The alignment will intersect Gilman Boulevard approximately 950 feet west of the existing signalized intersection at Front Street. The proposed intersection will require a new signalization system and possible major realignment of the south leg of the existing intersection. As with alignment #1 and #2 this alternative will require additional left turn storage to be added to Gilman Boulevard

Because this alignment utilizes the existing roadway adjacent to the existing BNSF line the alignment is nearly straight to the tie in to SE 62nd Street.

Pros

- Due to the use of the existing roadway the right-of-way impacts are reduced as compared to the other two alternatives. (Post Office 30,330 SF and Gilman Station 2,570 SF).
- The required impacts of vertical grade are minimized compared to the previous two alternatives due to the utilization of the existing roadway grade.
- This alignment does not require the use of horizontal curves to traverse through the existing I-90 bridge piers which results in a safer alignment as compared to the previous alignments.

Cons

- The existing alignment at the intersection with Gilman Boulevard will require the intersection to be developed as a skewed / offset intersection resulting in restricted or difficult turning movements off of Gilman Boulevard
- The result of a skewed / offset intersection is a decrease in safety of operation and a much more complicated and expensive signal system. (Split Phasing)
- Because the existing east entrance into Gilman Station is located near the proposed intersection the result may be a restriction of ingress and egress from the parking lot. This may result in limited circulation within the Gilman Station parking lot.
- Due to the skewed intersection proposed at Gilman Boulevard the left turn off of Gilman Boulevard onto the new alignment, left turn restrictions will be required for larger vehicles.
- A major impact of this intersection alignment is the offsetting of the intersection on the south leg. The reconfiguration of the intersection may require major realignment of the south intersecting legs. Typically an offset intersection is avoided to reduce large intersection movements and confusing turning routes.

I-90 to SE 62nd Street

The proposed alignment will follow the existing roadway currently serving Zetec and then travel along a new alignment to the intersection with SE 62nd Street. The proposed roadway will widen adjacent to the Zetec property to provide a left turn pocket. Impacts to the adjacent properties will include a loss of 44 parking stalls located within the Railroad Right-of-Way that is owned by King County and allowed through a lease agreement and an additional 8 parking stalls located on the Denton property north of Zetec. Opportunities for mitigation of the loss of parking will need to be investigated further. According to the lease agreement by King County, it does not appear that there are any stipulations for providing or replacing any parking within the Railroad Right-of-Way if the lease agreement is cancelled. Additional impacts include 2,375 SF of wetland impacts along the east side of the roadway adjacent to the existing BNSF rail line.

SE 62nd Street

The proposed improvements to SE 62nd Street include realignment and widening of the intersection with 221st Place SE to form a tee intersection. The intersection will provide separate dedicated left and right turn lanes onto 221st Place SE. The widening for the turning lanes will extend approximately 400 feet from the 221st Place SE intersection and require a limited amount of right-of-way acquisition.

221st Place SE (SE 62nd Street to SE 56th Street)

As previously discussed, the proposed alignment will follow the existing 221st Place SE from SE 62nd Street to SE 56th Street. Two roadway section alternatives were developed to investigate potential impacts to existing properties as well as impacts to Issaquah Creek.

Full Width

This alternative will provide a fully built out section including two 14-foot wide travel lanes, an 11-foot wide two-way left turn lane and 5.5-foot sidewalks on both sides.

This roadway section will allow the highest level of capacity for traffic due to the use of the two-way left turn lane to provide turning refuge for left turns outside the main through movement. This alternative also provides pedestrian facilities on both sides of the new roadway.

Pros

- This roadway section will allow the highest level of capacity for traffic due to the use of the two-way left turn lane to provide turning refuge for left turns outside the main through movement.
- This alternative also provides pedestrian facilities on both sides of the new roadway.

Cons

- To avoid impacts to Issaquah Creek, the widening for the increased roadway width favored the east side which impacted existing development and increased the required right-of-way acquisition.
- The increased roadway width impacts private stormwater drainage facilities on the Puget Sound Energy property and potentially on the property owned by Devon and Kale Tolkin.

Modified Width

The second alternative developed for this section provided for a reduced section to include two 14-foot travel lanes and a 5.5-foot sidewalk on the east side only.

This section reduced the right-of-way impact from the full width alternative however, could conflict with future turning movements of entering and exiting vehicles from the businesses along the roadway without the two-way left turn lane provided in the first option.

These improvements are considered to be minimum necessary to correct the existing design deficiencies along this corridor due to the narrow existing roadway in places and the undesirable alignment. Adding additional traffic to this section of roadway without improvements will present traffic safety issues.

Pros

- This roadway section will minimize the right-of-way acquisition required from the adjacent property owners along the east side of the alignment.
- This alternative does not impact the private drainage treatment facilities on the Tolkin property.
- Realigning intersection to a Tee configuration will provide for adequate traffic safety and right-of-way control for the intersection.

Cons

- Only provides pedestrian access on the east side of the roadway.
- The increased roadway width impacts private stormwater drainage facilities on the Puget Sound Energy property.
- Does not provide a two-way left turn lane, which may impact the ultimate capacity of the roadway section between SE 62nd Street and SE 56th Street due to conflicting left turn movements.

RIGHT-OF-WAY

The existing right-of-way width varies along the entire length of the alignment from Gilman Boulevard to SE 56th Street. The acquisition requirements also vary depending on the alignment alternatives previously described. A detailed schedule of right-of-way impacts is shown on the attached conceptual plan sheets (See Appendix A) and the associated costs are included in the preliminary costs estimates (See Appendix B).

ENVIRONMENTAL

Prior to initiating the field work, background research, data, and mapping files were collected from the City of Issaquah and King County. Existing reports from development projects like the U.S. Post Office and the East Lake Sammamish Trail were reviewed for information related to environmentally sensitive areas found on properties adjacent to the proposed roadway. Aerial photographs with topography were also reviewed for possible wetlands locations.

Field work occurred over two days in late February and early March. The boundaries of environmentally sensitive areas found within the project study area such as wetlands and the North Fork of Issaquah Creek were located using a portable Global Positioning System (GPS). The Ordinary High Water Mark (OHWM) of the right bank of the creek was located by the GPS. The majority of wetlands in the study area had been

delineated previously as part of the East Lake Sammamish Trail environmental documentation. One new wetland was found adjacent to the creek, along 221st Place SE, across from the Puget Sound Energy facility. An inaccessible drainage ditch running parallel to I-90 was viewed through a Washington Department of Transportation fence. It was determined that the alignment alternatives would not be affected by the ditch so further investigation for this preliminary stage was stopped.

The GPS coordinates of the wetland information were imported into the base map. This provided the information to identify wetland and stream locations, design alternative alignments around those areas, and avoid impacts where possible. Due to right-of-way constraints, approximately 2,375 square feet of wetland area would be filled for placement of the new roadway. The wetland is sandwiched between the new East Lake Sammamish Trail and a portion of the Zetec property. Impacts during construction could impact several wetlands adjacent to the proposed road, south of the creek crossing. Mitigation for wetland and creek impacts, in compliance with the City of Issaquah sensitive area ordinance would be addressed in future project phases. Potential mitigation sites along the corridor include the opportunity for enhancement of the existing wetland mitigation site located north of the Zetec property and west of the proposed alignment. Other opportunities will be identified during final design and permitting.

STORM DRAINAGE

A conceptual level storm drainage layout has been performed to provide storm drainage conveyance and treatment for the proposed roadway (See Appendix A). The analysis of the drainage facilities was completed using the 2004 proposed draft of the King County Surface Water Design Manual. The assumptions incorporated into the analysis include:

- ❑ Flow Conservation Basin for Flow Control
 - Level 2 (Historic Conditions) – Match 2 and 10 year events
- ❑ Sensitive Lake Protection Menu
- ❑ Oil Control for High-use Intersections
- ❑ 4 foot depth assumed for pond sizing

The following discussion identifies the anticipated treatment facilities and the conveyance system requirements to provide treatment to the separate basins with the project corridor. Due to the limited amount of vertical elevation information provided in the original base mapping, various assumptions were made in determining flow patterns and treatment facility locations. Once a detailed topographic survey is completed a more detailed drainage analysis and design can be conducted.

Basin #1

This basin is identified as the area between Gilman Boulevard and I-90. The conveyance system within this basin will be comprised of underground storm sewer pipes and structures to carry the stormwater generated within the roadway to the proposed treatment facility. The treatment facility will be an above ground detention or wet pond. The proposed facility would expand the existing stormwater facility located on the US Post Office property north of the Gilman Station.

Basin #2

This basin is identified as the area between I-90 and the North Fork of Issaquah Creek. The roadway will again utilize an underground conveyance system to carry the generated stormwater to the proposed treatment facility. The proposed location for a wet pond or detention facility has been identified on the Denton parcel (#2124069034) just south of the creek.

Basin #3

Basin #3 includes the area between the North Fork of Issaquah Creek crossing to SE 56th Street. It is anticipated that the roadway grade will allow the collection and conveyance of stormwater generated within the roadway to be conveyed with storm sewer pipes into the treatment facility to be located on the Hamilton parcels (#1275300010 and #1275300015) near the SE 56th Street intersection. It has been assumed that all impacts to existing private stormwater facilities will be incorporated in the design of the roadway treatment facility to account for the increase in volume.

WSDOT IMPACTS

A critical determination in the feasibility of the proposed arterial from Gilman Boulevard to SE 56th Street is the crossing under the existing I-90 bridge and the possibility of conflicts with the existing bridge piers. HDR contacted WSDOT to discuss design criteria related to existing piers and potential issues related to this specific crossing. In discussions with WSDOT Local Programs and Developer Services Departments, it was conveyed that if the design utilized the WSDOT Design Manual there would not be any critical issues related to crossing under the existing facility. The WSDOT Design Manual states that for a design speed of 35 MPH or less the minimum clear distance is 2 feet from the face of the curb when using a standard curb and gutter in an urban setting. The proposed alignment alternatives provide a 3-foot offset from the existing 4-foot diameter bridge piers. As a result, no modifications to the existing structure would be necessary and no guardrail or barrier is required. As identified in the WSDOT Design Manual conformance to the clear zone requirements are mandatory and the actual clearances will be verified by base mapping during the next phase of the project.

Continued communication with WSDOT will be essential during the design phase. WSDOT will have review and approval rights for the plans within their limited access area.

COST ESTIMATES

Conceptual cost estimates were prepared to analyze the various alternatives and determine the total cost of the project. A summary of the identified costs is below and a detailed breakdown of each estimate can be found in Appendix B.

NW Gilman Boulevard to SE 62nd Street <i>(including tee intersection)</i>			
	<i>Design/ Construction</i>	<i>Right-of-way</i>	<i>TOTAL</i>
Alignment #1	\$ 2,216,879.90	\$ 6,022,797.50	\$ 8,240,000
Alignment #2	\$ 2,362,338.08	\$ 5,798,067.50	\$ 8,160,000
Alignment #3	\$ 2,727,329.13	\$ 5,015,472.50	\$ 7,743,000

SE 62nd Street to SE 56th Street			
	<i>Design/ Construction</i>	<i>Right-of-way</i>	<i>TOTAL</i>
Full Width	\$ 1,245,927.90	\$ 2,597,980.00	\$ 3,844,000
Reduced Width	\$ 1,016,466.28	\$ 2,423,190.00	\$ 3,440,000

Project Total			
	<i>Full Width</i>	<i>Reduced Width</i>	
Alignment #1	\$ 12,084,000.00	\$ 11,680,000.00	
Alignment #2	\$ 12,004,000.00	\$ 11,600,000.00	
Alignment #3	\$ 11,587,000.00	\$ 11,183,000.00	

SUMMARY AND CONCLUSIONS

HDR Engineering, Inc. has completed the conceptual investigation of the proposed City of Issaquah arterial connection between Gilman Boulevard and SE 56th Street. As part of the investigation, three alternatives were identified and analyzed for the connection to Gilman Boulevard. In addition to the intersection alternatives, two alternative roadway sections were investigated for the proposed roadway between SE 62nd Street to SE 56th Street. Working closely with City staff and the Administration and based on the critical components previously described related to design, safety, capacity, future development, right-of-way acquisition, and environmental impacts, we feel that the preferred alternative that meets the goals of the project and minimizes impacts to the property owners within the corridor is Gilman Intersection Alternative #1 (Post Office) with the modified width northern corridor. At an estimated cost of \$11,679,000, this alternative successfully weighs cost vs. impacts. This alignment will fit best within the existing transportation network with minimal negative impacts. The proposed design will require a slightly less than standard horizontal curvature (requiring advisory signage) but will still meet sight distance requirements. The cost of the section from Gilman Boulevard (Alternative #1 – Post Office) to SE 62nd Street including the Tee Intersection is \$ 7,416,672. However, completing only this segment will have significant traffic safety impacts for the roadway north of SE 62nd Street and is not recommended to construct only this segment without the northerly segment.